The design and construction of parallel computers is expensive and time consuming. Instruction level simulators represent one class of tools that can be used to ease this process. When compared to small scale prototypes, instruction level simulators offer the potential for superior instrumentation. This paper presents a simulation technique for shared-memory parallel computers, and examines the use of this technique for two very different shared-memory parallel machines.
The study presents the aspect of the quantum simulation of the Groover’s algorithm using contemporary parallel processors with shared memory. Linux operating system, C programming language and Olib library, created by the author for wider set of numerical calculations, were used as a programming environment. Introduction. Quantum algorithms are very difficult for simulation in contemporary computers because of their calculation complexity. Groover’s quantum algorithm implemented on contemporary computer is characterized by exponential complexity which is shown in the Fig. 1. 